



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,102	11/17/2003	Masafumi Kawase	S-2500/CONT	9782

35777 7590 04/21/2006

SHERMAN & ASSOCIATES
415 NORTH ALFRED STREET
ALEXANDRIA, VA 22314

EXAMINER

MOORE, MARGARET G

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/713,102	Applicant(s) KAWASE ET AL.	
	Examiner Margaret G. Moore	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13 to 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 to 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/151,825.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 14 to 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 14 to 16, reference to the formulas as described in claim 1 is confusing since claim 1 has been cancelled.

In claim 17, reference to "the monomer (A) and/or the monomer (B)" in claims 14 and 16 lacks antecedent basis while in claim 18, reference to "the trimethylsilyl group containing compound and/or the tris(trimethylsiloxy)silyl containing compound" in claims 13 or 15 lacks antecedent basis.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13, 15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsutsumi et al.

Tsutsumi et al. teach a process for producing an aqueous ink in which a trimethylsilyl group containing copolymer is added to ink (or coating) composition. Particular attention is drawn to Example 1. This shows the preparation of a copolymer by reacting t-butylmethacrylate (meeting (C) and claim 19), acrylic acid (meeting (G)) and a silicone macromer. The silicone macromer is shown on the top of column 4 and contains a terminal $\text{Si}(\text{CH}_3)_3$ group.¹ Thus the resulting copolymer will meet that claimed. See that the wt% of each monomer in Table 1 fall within the claimed ranges and column 12, line 53, teaches an average molecular weight of 10,000. The styrene acrylonitrile macromer in Table 1 meets (H) in claim 15. In this manner the instant claims are anticipated.

¹ Please see Table 8 in 6,074,698 that confirms that the R groups in FM-0711 are, in fact, methyl.

Art Unit: 1712

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14, 16, 18 and 23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tsutsumi et al.

These claims are in a product by process format and, while the products are prepared by different processes, they appear to be inherently the same. Note that the triethylsilyl group containing compound and/or the tris(trimethylsiloxy)silyl containing compound can be any compound while it is possible to react one of the compounds in claim 18 with a copolymer and form a copolymer such as that made by Tsutsumi et al.

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. Please note MPEP 2113, which addresses the appropriateness of a rejection under 35 USC 102/103 for product by process claims.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al.

While the copolymer in Example 1 does not contain any of these particular monomers, please see column 5, lines 43 and 44, which teaches monomers within the breadth of this claim. One having ordinary skill in the art would have been motivated by the teachings on column 5 of Tsutsumi et al. to include such monomers and this renders the instant claim obvious.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

Art Unit: 1712

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 13 to 16 and 18 to 24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 to 5 of U.S. Patent No. 6,630,522 in view of Tsutsumi et al. '522 teaches additives for paints and inks which result in high quality vanishing. These polymers meet those found in the instant claims. See for instance claim 1, in which the monomer (A) will result in a terminal $\text{Si}(\text{CH}_3)_3$ group, monomer (B) meets (G) or (C) while monomer (C) meets (D) or (F). The molecular weight and amounts of each monomer fall within that claimed ranges. See claim 4 which teaches the monomer (H). This differs from the instant claims in that it does not specifically claim water based inks or paints.

Tsutsumi et al. disclosed that water based inks are quite common in the art.

Upon reading the teachings in '522 one having ordinary skill in the art would have been motivated to look to the prior art to discover inks that are known in the art as the inks used in '522. From this the skilled artisan would have been motivated to turn to the teachings and inks in Tsutsumi et al. and would have found the selection of a water based ink to have been obvious since such inks are known and commonly used in the art. In this manner the instant claims are rendered obvious.

Art Unit: 1712

9. 6,165,457 and 6,762,217 are cited as being of general interest. These both teach polymers that meet that found in claim 13 but are not as close or closer to the claims as the prior art cited supra. Kawase et al. '335 is cited as being of general interest. This reference fails to teach or suggest a water based coating composition. Tsuboi et al. was cited in the parent application but also fails to teach or suggest a water based composition. In addition it leads one away from the selection of water as a solvent since the copolymer therein is water dissolvable, a requirement for the purpose of the polymer. Donald et al. and Fock et al. are also cited as being of general interest as these reference show that polymers having $\text{Si}(\text{CH}_3)_3$ groups are commonly formed as acid precursors since the $\text{Si}(\text{CH}_3)_3$ groups undergo hydrolysis in water. This also leads one away from polymers having $\text{Si}(\text{CH}_3)_3$ groups in a water composition.


10. Claim 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art fails to teach or suggest the selection of such a Si monomer in a copolymer having each of the required components in the required amounts, used in a method as claimed.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1712

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Margaret G. Moore
Primary Examiner
Art Unit 1712

mgm
4/19/06